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LADAS & PARRY LLP

Application Serial No. 10/631,877
Reply to Office Action of June 14, 2006

PATENT
Docket: CU-3620

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. (withdrawn) Procedure for the production of one in at least two subsequent castings molded object in a mold consisting of at least three mold parts, characterized by the fact that at least one middle part (3), placed between the preferably stationary front part (1) and the movable back part (2), after molding of the first part of the object (5) are turned at least one time preferably 180 degrees around an axis/axle (4), which preferably is at a right angle to the movement direction between the front part (1) of the mold and the back part (2), before the molding of the following part of the object (10).
2. (withdrawn) Procedure for the production of one in at least two subsequent castings molded object as mentioned in claim 1, characterized by the fact that the material in the at least two molded parts of the object (5) and (10) either can be the same, e.g. the same thermoplastic material, or different materials such as two different thermoplastic materials, a thermoplastic material and an elastomer or a thermoplastic material and one for the sinter process decided material.
3. (withdrawn) Procedure for the production of one in at least two subsequent castings molded object as mentioned in one or more of the previous claims, characterized by the fact that at least one of the turnable middle parts (3) is thermal insulated, e.g. with an insulating plate (11) between the two surfaces of the middle

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part (3), so that e.g. in the area of the mold on one side of the middle part (3) by the front part (1) a clearly higher temperature can be maintained than in the area at the back part (2). (This method can also be realized with a normal index mold/turn mold, where the one side of the turnable part is insulated in respect to the other side, as well as a combination of the two designs is possible).

4. (withdrawn) Procedure as mentioned in claim 3, characterized by the fact that the with the insulating plate (11) equipped turnable middle part (3) are turned 180 degrees before the object/objects are removed from the first part of the mold to the second part of the mold, hereafter the middle part (3) is turned back again, whereby the objects e.g. can be transferred from a warm to a colder mold part without these two mold parts being in considerable contact with each other, while the object/objects are transferred to the new temperature area. Hereafter the middle part is turned 180 degrees again and the molding continues. Using this procedure two considerable different materials e.g. can be molded together, such as a thermoplastic material and an elastomer, silicone etc.. (This method can also be realized by a normal index mold/turn mold).

5-10. (cancelled)

11. (currently amended) A mold comprising:

a front part having a front profile;

a back part having a back profile; and

a middle part having a middle profile;

wherein at least one of the front part and the back part move relative to one

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another between an open position and a closed position[[:]]--_--

wherein the middle part is disposed between the front and back parts in the closed position[[:]]--_--

wherein the middle part ~~is divided into several independent sections each~~ being turnable about a ~~respective~~ axis--_--

wherein the front and middle parts are alignable together to form a perimeter of a first cavity substantially bounded by the front and middle profiles when paired together whereby a sub-unit molded product comprising a first shape having a front complementary profile and a middle complementary profile can be formed by filling the first cavity with a substrate, wherein the front part and the middle part are separable from each other, wherein the back and middle parts are alignable together when the sub-unit molded product is attached to the middle part to form a perlmeter of a second cavity substantially bounded by the middle complementary profile and the back profile when paired together whereby an assembled object comprising a second shape having the front complementary profile and a back complementary profile can be formed by filling the second cavity with a substance that merges with the sub-unit molded product.

12. (currently amended) The mold according to Claim 11 wherein ~~each section of~~ said middle part rotates approximately 180 degrees between molding cycles.

13. (currently amended) The mold according to Claim 11 wherein ~~said axes of the~~ rotation ~~axis for each section~~ of the middle part ~~are~~ is perpendicular to the relative movement direction between the front and back parts.

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14. (currently amended) The mold according to Claim 11 wherein the middle part ~~is divided into~~ having several back profiles similar section.

15. (currently amended) The mold according to Claim 11 wherein the middle part having an insulating plate wherein the middle part is thermally insulated.

16. (currently amended) The mold according to Claim 11 wherein ~~a front of each section of the middle part is identical to a back of each section~~ the front part having several front profiles.

17. (currently amended) The mold according to Claim 11 wherein ~~a front of each section of the middle part is a mirror image of a back of each section~~ the back part having several back profiles.

18. (currently amended) The mold according to Claim 11 further comprising ~~ejectors~~ an ejector in the middle part.

19. (currently amended) The mold according to Claim 18 ~~further comprising wherein the ejector having~~ a ball screw mechanism ~~which allows the ejectors to function in multiple directions.~~

20. (currently amended) The mold according to Claim 11 further comprising at least one hold-down to retain the sub-unit molded product to the middle part during a ~~molded object within the mold through~~ a molding cycle.

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21. (currently amended) The mold according to Claim 11 wherein ~~the middle part is turned 180 degrees before an object is removed from the front part of the mold to the back part of the mold, thereafter the middle part is turned 180 degrees back again~~

the substrate is selected from the group consisting of a thermoplastic material, an elastomer, a silicon plastic, and a metal.

22. (currently amended) The mold according to Claim 11 wherein ~~the middle part comprises several middle parts~~ the substance is selected from the group consisting of a thermoplastic material, an elastomer, a silicon plastic, and a metal.

23. (currently amended) The mold according to Claim 11 wherein ~~metal is molded in one of the front or back part, and at the same time plastic is molded in the other of the front or back part~~ the substrate comprises a metal and the substance comprises a plastic material.

24. (new) A mold comprising:

a front part having a front profile;

a back part having a back profile; and

a middle part having a middle profile,

wherein the front and back parts are stationary and the middle part is movable and rotatable relative to the front and back parts,

wherein the front and middle parts are alignable together to form a perimeter

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of a first cavity substantially bounded by the front and middle profiles when paired together whereby a sub-unit molded product comprising a first shape having a front complementary profile and a middle complementary profile can be formed by filling the first cavity with a substance,

wherein the front part and the middle part are separable from each other,

wherein the back and middle parts are alignable together when the sub-unit molded product is attached to the middle part to form a perimeter of a second cavity substantially bounded by the middle complementary profile and the back profile when paired together whereby an assembled object comprising a second shape having the front complementary profile and a back complementary profile can be formed by filling the second cavity with a substance that merges with the sub-unit molded product.

25. (new) The mold according to Claim 24 further comprising at least one hold-down to retain the sub-unit molded product to the middle part during a molding cycle.

26. (new) The mold according to claim 24 further comprising an ejector.

27. (new) A mold comprising:

a front part having a front profile; and

a back part having a back profile and a middle profile,

wherein the front part is stationary and the back part is movable and rotatable relative to the front part,

wherein the front and back parts are alignable together to form a perimeter of a first cavity substantially bounded by the front and middle profiles when paired

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together whereby a sub-unit molded product comprising a first shape having a front complementary profile and a middle complementary profile can be formed by filling the first cavity with a substrate,

wherein the front part and the back part are separatable from each other,

wherein the front part and the back part are alignable together when the sub-unit molded product is attached to the front part to form a perimeter of a second cavity substantially bounded by the first complementary profile and the back profile when paired together whereby an assembled object comprising a second shape having the front complementary profile and a back complementary profile can be formed by filling the second cavity with a substance that merges with the sub-unit molded product.

28. (new) The mold according to Claim 27 further comprising at least one hold-down to retain the sub-unit molded product to the middle part during a molding cycle.

29. (new) The mold according to claim 27 further comprising an ejector.